

REMARKS

Claims 1-16 and 19-28 are pending in this application. By this Amendment, the specification and claims 1-6, 8-10, 14, 16 and 19 are amended, claims 17-18 are canceled without prejudice or disclaimer, and new claims 25-28 are added. Various amendments are made for clarity and are unrelated to issues of patentability.

The Office Action rejects claims 1-8, 19, 21 and 22 under 35 U.S.C. §112, first paragraph. It is respectfully submitted that the above amendments obviate the grounds for rejection. More specifically, independent claim 1 specifically recites a first driver, a second driver and an address driver. The written description clearly describes these respective drivers. See also FIG. 12. Thus, it is respectfully that the written specification reasonably conveys to one skilled in the art that the inventors had possession of the claimed features at the time of the invention. Withdrawal of the rejection under 35 U.S.C. §112 is respectfully requested.

The Office Action rejects claims 1-16 and 20-24 under 35 U.S.C. §102(b) by U.S. Patent 6,232,935 to Fukushima et al. (hereafter Fukushima) or under 35 U.S.C. §103(a) over Fukushima in view of U.S. Patent Publication 2003/0071577 to Du et al. (hereafter Du), U.S. Patent Publication 2003/0095084 to Mizobata, U.S. Patent 6,876,340 to Kobayashi, U.S. Patent Publication 2003/0122742 to Akiba and/or U.S. Patent 7,030,839 to Higashino et al. (hereafter Higashino). The Office Action also rejects claims 17-18 under 35 U.S.C. §102(b) by U.S. Patent 6,252,568 to Iseki et al. (hereafter Iseki). The rejections are respectfully traversed with respect to the pending claims.

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Dependent claim 19 has not been rejected based on the prior art and therefore is believed to contain allowable subject matter.

Independent claim 1 recites a first driver for initializing the cells, a second driver, and an address driver to select on-cells and to select off-cells, wherein on-cells are selected by the address driver applying data of a first voltage to the address electrode and the first driver applying a scan pulse of a second voltage to the scan electrode, and off-cells are selected by the address driver applying data of a third voltage to the address electrode and the first driver applying the scan pulse to the scan electrodes, wherein the third voltage is greater than the first voltage.

The applied references do not teach or suggest at least these features of independent claim 1. More specifically, the Office Action (on page 4) cites Fukushima's FIG. 10A as showing the claimed address driver for selecting on-cells and for selecting off-cells. The Office Action identifies Fukushima's address pulses 42 as corresponding to the claimed first voltage and scan pulses 45 as corresponding to the claimed scan pulse. The Office Action also asserts that off-cells would be chosen by application of zero voltage (i.e., the alleged third voltage).

Fukushima's FIG. 10A does not teach or suggest selecting on-cells and/or selecting off-cells as those terms would be known to one skilled in the art. Fukushima has no teaching or suggestion for a driving methodology of selecting on-cells and selecting off-cells. More specifically, Fukushima does not teach or suggest that on-cells are selected by the address driver applying data of a first voltage to the address electrode and the first driver applying a scan pulse of a second voltage to the scan electrode in combination with off-cells being selected by the

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address driver applying data of a third voltage to the address electrode and the first driver applying the scan pulse to the scan electrodes, wherein the third voltage is greater than the first voltage.

Applicant also notes that the Office Action alleges that scanning pulses correspond to the claimed scan pulse. However, as is clearly shown in FIG. 10A, the scanning pulse 45 is only applied at a time corresponding to the data pulses. See col. 8, lines 41-44. As such, under the Office Action's interpretation, Fukushima does not suggest off-cells being selected by the address driver applying data of a third voltage and the first driver applying the scan pulse.

For at least the reasons set forth above, Fukushima does not teach or suggest all the features of independent claim 1. The other applied references do not teach or suggest the features of independent claim 1 missing from Fukushima. Thus, independent claim 1 defines patentable subject matter.

Independent claim 9 recites initializing the cells, selecting on-cells by applying data of a first voltage to the address electrode and applying a scan pulse of a second voltage to the scan electrode at a time in which the data of the first voltage is applied to the address electrode, and selecting off-cells by applying data of a third voltage to the address electrode and applying the scan pulse to the scan electrode at a time in which the data of the third voltage is applied to the address electrode, wherein the second voltage is higher than the first voltage.

For at least similar reasons as set forth above, the applied references do not teach or suggest at least these features of independent claim 9. That is, the applied references do not teach or suggest selecting on-cells by applying data of a first voltage to the address electrode and

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applying a scan pulse of a second voltage to the scan electrode at a time in which the data of the first voltage is applied to the address electrode. Still further, the applied references do not teach or suggest selecting off-cells by applying data of a third voltage to the address electrode and applying the scan pulse to the scan electrode at a time in which the data of the third voltage is applied to the address electrode. Thus, independent claim 9 defines patentable subject matter.

Independent claim 25 recites a first driver to initialize the cells by providing a falling ramp waveform and a rising ramp waveform following the falling ramp waveform to the scan electrode during a reset period, and a second driver to apply pulses to the sustain electrode. Independent claim 25 also recites an address driver to select on-cells by applying data of a first voltage to the address electrode during the reset period, and the address driver to select off-cells by applying data of a third voltage to the address electrode during an address period. Independent claim 25 further recites the first driver applying a scan pulse of a second voltage to the scan electrode when the data of the first voltage is applied to the address electrode, and the first driver applying the scan pulse to the scan electrode when the data of the third voltage is applied to the address electrode during the address period, wherein the third voltage is greater than the first voltage.

For at least similar reasons as set forth above, the applied references do not teach or suggest at least these features of independent claim 25. More specifically, the applied references do not teach or suggest that the address driver to select on-cells by applying data of a first voltage to the address electrode during the reset period and the address driver to select off-cells by applying data of a third voltage to the address electrode during an address period, wherein the

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first driver applying a scan pulse of a second voltage to the scan electrode when the data of the first voltage is applied to the address electrode, and the first driver applying the scan pulse to the scan electrode when the data of the third voltage is applied to the address electrode during the address period and at a same time as the first driver applying the scan pulse to the scan electrodes. Independent claim 25 therefore defines patentable subject matter.

For at least the reasons set forth above, each of independent claims 1, 9 and 25 defines patentable subject matter. Each of the dependent claims depends from one of the independent claims and therefore defines patentable subject matter at least for this reason. In addition, the dependent claims recite features that further and independently distinguish over the applied references.

For example, dependent claim 19 recites that the address driver applies data of the first voltage to the address electrode during a reset period, and applies data of the third voltage to the address electrode during an address period, and the first driver applies the scan pulse to the scan electrode during the address period. The applied references do not teach or suggest at least these features of dependent claim 19. Further, the Office Action does not reject dependent claim 19 based on prior art. Thus, dependent claim 19 defines patentable subject matter at least for this additional reason.

Still further, dependent claim 20 recites that the scan pulse of the second voltage to select on-cells is applied during an address period and the scan pulse to select off-cells is applied during the address period. The applied references do not teach or suggest at least these features of

dependent claim 20. Thus, dependent claim 20 defines patentable subject matter at least for this additional reason.

Dependent claim 4 recites the first driver supplies a falling ramp waveform and a rising ramp waveform following the falling ramp waveform to the scan electrode, and the second driver supplies a fourth voltage to the sustain electrode, the fourth voltage being a negative voltage. When discussing dependent claim 4 (and dependent claims 5 and 12), the Office Action (on pages 10-11) attempts to modify Fukushima's driving technology to include a driving technique of a sustain electrode in a reset period as shown in Kobayashi's FIG. 7. However, there is no basis for this modification. Further, the Office Action's combination does not take into account that a modification of Kobayashi's driving technique would result in a different arrangement of wall charges. Portions of different driving techniques may not be simply combined as alleged in the Office Action. The applied references do not teach or suggest all the features of dependent claims 4, 5 and 12. Thus, dependent claims 4, 5 and 12 define patentable subject matter at least for this additional reason.

CONCLUSION

In view of the foregoing, it is respectfully submitted that the application is in condition for allowance. Favorable consideration and prompt allowance of claims 1-16 and 19-28 are earnestly solicited. If the Examiner believes that any additional changes would place the application in better condition for allowance, the Examiner is invited to contact the undersigned attorney at the telephone number listed below.


Serial No. **10/784,782**

Docket No. **YHK-0132**

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To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this, concurrent and future replies, including extension of time fees, to Deposit Account 16-0607 and please credit any excess fees to such deposit account.

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Date: November 16, 2007

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